

U.S. Department
of Transportation

United States
Coast Guard



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United States Coast Guard

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5730

SEP 19 1996

The Honorable Albert Gore, Jr.
President of the Senate
Washington, DC 20510

Dear Mr. President:

Enclosed is the Interagency Coordinating Committee on Oil Pollution Research biennial report, required by Title VII of the Oil Pollution Act of 1990 (OPA 90). This report describes activities carried out under Title VII of OPA 90 in fiscal years 1993 and 1994, and briefly addresses activities in fiscal years 1995 and 1996.

The Interagency Coordinating Committee is continuing to revise its Oil Pollution Research and Technology Plan, which identifies areas requiring additional research in order to reduce the threats posed by the production and transportation of oil. This plan should be published in late 1996.

An identical letter has been sent to the Speaker of the House of Representatives.

Sincerely,

A handwritten signature in black ink, reading "Joseph J. Angelo".

Joseph J. Angelo
Chairman
Interagency Coordinating Committee
on Oil Pollution Research

Encl: (1) Interagency Coordinating Committee on Oil Pollution Research Biennial Report for
Fiscal Years 1993 and 1994

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The Honorable Newt Gingrich
Speaker of the House of Representatives
Washington, DC 20515

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Fiscal Years 1993 and 1994

**INTERAGENCY COORDINATING COMMITTEE ON
OIL POLLUTION RESEARCH**

**BIENNIAL REPORT
FOR FISCAL YEARS 1993 AND 1994**

**PREPARED UNDER AUTHORITY OF
TITLE VII, OIL POLLUTION ACT OF 1990
(PUBLIC LAW 101-380)**

**SUBMITTED TO THE CONGRESS OF
THE UNITED STATES**

INTERAGENCY COORDINATING COMMITTEE ON OIL POLLUTION RESEARCH

Committee Members:

Mr. Joseph Angelo, Chairman, U.S. Coast Guard
Mr. Bud Danenberger, Minerals Management Service
Dr. David Evans, National Institute of Standards and Technology
Mr. Paul Hankins, Department of the Navy
Ms. Gay Leslie, Department of Energy
Dr. Fred Lindsey, Environmental Protection Agency
Mr. Paul Mentz, Maritime Administration
Dr. Frank Muller-Karger, National Aeronautics and Space Administration
Dr. William Roper, Army Corps of Engineers
Dr. Jean Snider, National Oceanic and Atmospheric Administration
Mr. Tom Smith, Federal Emergency Management Agency
Dr. Robert Stewart, National Biological Survey
Dr. Bob Walter, Research and Special Programs Administration

Staff

CDR Scott Newsham, U.S. Coast Guard

FOREWORD

The Interagency Coordinating Committee on Oil Pollution Research (Interagency Committee) first reported to Congress in June 1994. The first Biennial Report covered, generally, the first two years of activity for the Interagency Committee, 1991-92, but was updated with information and publications from most of fiscal year 1993. This second biennial report completes the coverage of fiscal years 1993 and 1994.

During fiscal years 1995-96, the Interagency Committee continues to coordinate Federal efforts on a number of important oil pollution research projects. These include: planning and cosponsoring future International Oil Spill Research and Development Forums; revising the Oil Pollution Research and Technology Plan; administering the new Regional Research Program of grants to universities and nonprofit research institutions; and continued planning and execution of Port Oil Pollution Minimization Demonstration projects. The Interagency Committee anticipates extensive interaction with states, industry, and the international Research and Development (R&D) community during this period.

Joseph J. Angelo
Chairman
Interagency Coordinating Committee on Oil Pollution Research
Washington, D.C.

Table of Contents

Membership	i
Foreword	ii
Table of Contents	iii
Executive Summary	1
1. Introduction	3
1.1 Purpose of Report	3
1.2 Organization of Report	3
2. Background	3
2.1 History of Interagency Committee	3
2.2 Organization of the Interagency Committee.....	4
2.3 Interagency Committee Programs	4
3. Interagency Committee Accomplishments During the Past Two Years (1993-1994)	5
3.1 Quarterly Meetings	5
3.2 Oil Pollution Research and Technology Plan	5
3.2.1 Marine Board Involvement	5
3.2.2 Interagency Committee Response to Recommendations	6
3.3 Planning for Second International Oil Spill R&D Forum ...	7
3.4 Revised/Expanded International Oil Pollution R&D Abstract Database	7
3.5 Activities to Promote Cooperation on R&D	8
3.6 Coordination With States and Industry	8
3.7 Regional Research Grant Program	9
3.8 Oil and Hazardous Materials Simulator and Environmental Test Tank (OHMSETT)	10
3.9 Port Demonstration Projects	11
4. Interagency Committee Activities For 1995-1996	11
4.1 Overview	11
4.2 Activity/Status for Next Biennial Report	11

EXECUTIVE SUMMARY

PURPOSE AND MEMBERSHIP OF INTERAGENCY COMMITTEE

The purpose of the Interagency Committee is twofold: (1) to prepare a comprehensive, coordinated Federal oil pollution R&D plan; and (2) to promote cooperation with industry, universities, research institutions, state governments, and other nations through information sharing, coordinated planning, and joint funding of projects. The membership of the Interagency Committee is specified by Title VII of the Oil Pollution Act of 1990 (OPA 90) and includes 13 Federal agencies.

UPDATING THE OIL POLLUTION RESEARCH AND TECHNOLOGY PLAN

As required by OPA 90, the National Research Council (NRC) of the National Academy of Sciences performed an assessment of the adequacy of the Interagency Committee's Oil Pollution Research and Technology Plan. This plan serves as the basis for implementation of the OPA 90 mandated Federal interagency oil pollution R&D program. Using this assessment as a guide, the Interagency Committee formed an ad hoc subcommittee to revise the plan. This revision is in progress.

SECOND INTERNATIONAL CONFERENCE ON OIL SPILL R&D

The Interagency Committee, the International Maritime Organization (IMO), and the Commission of the European Communities made preparations to cosponsor the International R&D Forum at IMO headquarters, London, during May 23-26, 1995. A Call for Papers was published and distributed in August 1994. In contrast with the biennial International Oil Spill Conference which takes an overall look at oil spill issues, the Forum is focused solely on providing opportunities for organizations to exchange R&D information, identify research gaps, and avoid duplication and maximize cooperative efforts.

REVISED INTERNATIONAL OIL POLLUTION R&D DATABASE

A revised and expanded version of the database was published and distributed in October 1993. In November 1993, the database was transferred to the IMO after its Marine Environment Division agreed to assume responsibility for database maintenance and to publish it biennially for distribution during each Forum. The database contains short descriptions of funded oil spill R&D projects worldwide. It is intended to help R&D managers avoid duplicative projects and foster cooperative efforts.

REGIONAL RESEARCH PROGRAM

The Coast Guard, on behalf of the Interagency Committee, concluded an agreement with the Research and Special Programs Administration's (RSPA's) Volpe National Transportation Systems Center (VNTSC) to administer the Regional Research Program competitive solicitation. The program is designed to be a competitive solicitation of oil spill research grant proposals throughout the United States. Topics are limited to areas identified in the Research and Technology Plan and emphasize basic research. Grant recipients are required to provide matching funds equal to the amount of the grant. The Interagency Committee reviewed and approved ten grant awards.

DEMONSTRATION PROJECTS

The U.S. Coast Guard conducted extensive planning for a Port Oil Pollution Minimization Demonstration Project held in New Orleans on December 8-9, 1994. The Coast Guard coordinated a demonstration held in New York in October 1995. These demonstrations were designed to ensure research program results are applied in real-world situations, and attention is given to implementing oil pollution minimization programs which focus on the complete system of oil shipment, storage and use, or spill response, cleanup, and remediation.

OTHER INTERAGENCY COMMITTEE PLANNED ACTIVITIES

The Coast Guard and National Oceanic and Atmospheric Administration (NOAA), on behalf of the Interagency Committee, are working with the University of Miami's South Florida Oil Spill Research Institute to develop a statistical model of oil transportation from source to final use or spill. This model will assist the Committee in developing its research plans. The Coast Guard and Minerals Management Service (MMS) are exploring ways to provide additional R&D testing at the Oil and Hazardous Materials Simulated Environmental Test Tank (OHMSETT) facility. The Coast Guard is continuing its research efforts in Satellite-Based Dependent Surveillance Vessel Traffic System in Narragansett Bay, RI.

1. Introduction.

1.1 Purpose of Report.

Section 7001(e) of OPA 90 requires that the Chairman of the Interagency Coordinating Committee on Oil Pollution Research submit a Biennial Report to Congress on October 30. The Biennial Report must describe activities carried out under Title VII of OPA 90 in the preceding two fiscal years and activities proposed to be carried out in the current two fiscal-year-period.

1.2 Organization of Report

This report begins with background on the Interagency Committee including its purpose, membership, organization, and programs. Subsequent sections describe accomplishments of the Interagency Committee during the first two fiscal years, 1993 and 1994, and briefly addresses activities for fiscal years 1995 and 1996, which will be described in detail in the next report.

2. Background

2.1 History of Interagency Committee.

The purpose of the Interagency Committee as described at Section 7001(a)(2) in Title VII of OPA 90 is twofold: (1) to prepare a comprehensive, coordinated Federal oil pollution R&D plan; and (2) to promote cooperation with industry, universities, research institutions, state governments, and other nations through information sharing, coordinated planning and joint funding of projects.

The membership of the Interagency Committee is specified by Title VII of OPA 90 and consists of representatives from the Department of Commerce (including the National Oceanic and Atmospheric Administration (NOAA) and the National Institute of Standards and Technology (NIST)), the Department of Energy (DOE), the Department of the Interior (including the Minerals Management Service (MMS) and the U.S. Fish and Wildlife Service (USFWS)), the Department of Transportation (DOT) (including the U.S. Coast Guard (USCG), the Maritime Administration (MARAD), and the Research and Special Programs Administration (RSPA)), the Department of Defense (including the U.S. Army Corps of Engineers (USACE), the U.S. Navy (USN)), the Environmental Protection Agency (EPA), the National Aeronautics and Space Administration (NASA), and the U.S. Fire Administration (USFA) in the Federal Emergency Management Agency. The President signed an

Executive Order delegating authority to the Secretary of the DOT to name additional members.

2.2 Organization of the Interagency Committee.

The Chairman of the Interagency Committee is a representative of the DOT as required by Section 7001(a)(3). The Secretary of Transportation named Commandant, USCG to chair the Committee. The Commandant named Mr. Joseph J. Angelo as his representative. Mr. Angelo is the Associate Program Director in the Office of Marine Safety, Security, and Environmental Protection at USCG headquarters in Washington, D.C.

A member of the Technical Advisory Staff in the Office of Marine Safety, Security, and Environmental Protection at USCG headquarters in Washington, D.C., is assigned to serve as the Executive Director of the Interagency Committee.

There are seven subcommittees. Five subcommittees have responsibility for various categories of oil pollution R&D or special programs. These are: (1) Spill Prevention; (2) Spill Response, Planning, and Management; (3) Effects and Restoration; (4) Grants; and (5) State, Industry, and International Coordination. There are two ad hoc subcommittees: (1) Research Plan Revision and (2) Port Demonstration Projects.

2.3 Interagency Committee Programs.

The Interagency Committee is required to implement three programs described in Title VII of OPA 90. These are:

(1) a comprehensive program of Federal oil pollution R&D contained in the Interagency Committee's Oil Pollution Research and Technology Plan which provides for research, development, and demonstration of new or improved technologies which are effective in preventing or mitigating oil discharges and which protect the environment;

(2) a Regional Research Program of competitive grants to universities and other research institutions; and

(3) a series of Port Oil Pollution Minimization Demonstration Projects. These programs are more fully described in Section 3 of this report.

Sections 7001(c)(9) and 7001(f) of OPA 90, as amended, authorize \$27.25 million annually to be appropriated

from the Oil Spill Liability Trust Fund (OSLTF) to pay for these programs. Additional funding for these programs has been limited due to competing agency program needs and caps on domestic discretionary spending.

3. Interagency Committee Accomplishments During the Past Two Years (1993-1994)

3.1 Quarterly Meetings.

The Interagency Committee holds quarterly meetings alternating between the Washington, DC area and other locations around the nation. During the period December 1992 - July 1994, quarterly meetings were convened at various facilities around the U.S. They included:

December 1992
DOT Headquarters
Washington, D.C.

April 1993
International Oil Spill
Conference and Exposition
Tampa, FL

July 1993
U.S. Coast Guard
National Strike Force
Coordination Center
Elizabeth City, NC

October 1993
David Taylor Model Basin
Carderock Division
Bethesda, MD

January 1994
Naval Air Warfare Center
Training Systems Division
Orlando, FL

April 1994
Minerals Management Service
Headquarters Building
Herndon, VA

July 1994
U.S. Coast Guard
Research & Development Center
Groton, CT

3.2 Oil Pollution Research and Technology Plan.

3.2.1 Marine Board Involvement

As required by OPA 90, the National Research Council (NRC) of the National Academy of Sciences concluded an assessment of the adequacy of the Interagency Committee's Oil Pollution Research and Technology Plan in September 1994. This plan serves as the basis for implementation of the OPA 90 mandated Federal interagency oil pollution R&D program.

The Coast Guard contracted with the Marine Board of the National Research Council to do the plan assessment. The Committee on Oil Spill Research and Development was formed by the Marine Board to perform the analysis. Using that committee's assessment and recommendations as a guide, the

Interagency Committee formed an ad hoc subcommittee to revise the plan. This revision is in progress and will incorporate the recommendations of the Marine Board's committee.

3.2.2 Interagency Committee Response to Recommendations

Systems Approach. In light of the Marine Board Committee comments that the original Oil Pollution Research and Technology Plan lacked a fully integrated, systems based approach to defining our agencies' R&D needs, the Interagency Committee embarked on a series of discussions through which it was agreed to rewrite the entire plan. The Committee is pursuing the recommended systems analysis and investigating ways to integrate the public, states, and industry into the goal setting and prioritization process.

The Plan Revision Subcommittee reported to the Committee-at-Large that the key issue in developing a new framework for the plan is the recommended systems analysis. The Coast Guard, on behalf of the Committee, has engaged the South Florida Oil Spill Research Center (SFOSRC) to create the Oil Transportation System Model and their work continues. The subcommittee expects to use the resulting analytical processes and outline from SFOSRC to format a new plan in 1996. (The SFOSRC was identified by Congress and funded by OPA 90 to develop a "center of excellence" in oil spill research.)

Existing MARAD funds at Volpe National Transportation Systems Center (Volpe Center) were used for a baseline study of the oil handling and transport processes in 1993. This study will be incorporated with the results of the SFOSRC efforts to keep the plan revision focused on a "systems" approach.

The subcommittee prepared an outline of issues to be covered in the revised plan and presented the plan outline and initial results of the bilateral efforts of SFOSRC and Volpe Center to the Committee at the first quarterly meeting in 1995.

Spill Prevention Research. To more fully demonstrate the scope of federal oil pollution prevention and mitigation efforts, the Committee agrees that the Research and Technology Plan should include those prevention related R&D and assessment projects that are undertaken by various agencies specifically for the purposes of OPA 90. The Committee has determined that prevention activities will be a primary focus of the revised plan.

Human Factors in Spill Prevention. The Committee agrees that human factors research is vital to spill

prevention. The subcommittee has already identified human factors research as a primary area for funding and one that should provide many opportunities for joint federal projects, as well as partnership opportunities with industry and state oil pollution research programs.

Public Participation in Research Planning. The Committee agrees that public participation in research planning is necessary to achieve a valid and balanced perspective on oil pollution issues and will continue to take steps to facilitate and increase involvement. One of the committee's standing subcommittees is State, Industry and International Liaison. Section 3.6 details committee involvement with states and industry, while 3.3 - 3.5 discuss international involvement and additional public interactions.

Field Experiments with Spill Response Technologies. The Committee agrees that field testing remains a vital and required component of any oil pollution R&D program and that a well-defined permitting process is needed. With a better definition of the parameters of field testing and an improved permitting process which provides the specific criteria upon which an application is evaluated, the research required to understand the use of burning, dispersants and bioremediation can be undertaken with scientific validity. The Committee intends to explore what can be done to bring this about.

3.3 Planning for 2nd International Oil Spill R&D Forum.

As a cosponsor, the Interagency Committee was involved in preparing for the Second International Oil Spill R&D Forum scheduled for May 23-26, 1995, at IMO Headquarters in London. In addition to the USCG, DOE, EPA and NOAA, the Commission of the European Communities provided funding in support of the Forum. Notices for the Second Forum were published in IMO Marine Environmental Protection Committee (MEPC) circulars. A Call for Papers went out in August 1994.

3.4 Revised International Oil Pollution R&D Abstract Database.

The Oil Pollution R&D Abstract Database is intended to facilitate the worldwide sharing of R&D information and promote cooperative efforts. The Interagency Committee published a revised database in October 1993. They relinquished administration of the database to the IMO's Marine Environment Division in November 1993. IMO will now update and distribute the database during each R&D Forum.

Nine hundred copies of the revised database, containing over 250 projects, were published and distributed to interested parties. The IMO compiled a list of additional international projects which were included in the third edition of the database which was updated and distributed in conjunction with the Second International R&D Forum.

3.5 Activities to Promote Cooperation on R&D.

The Executive Director of the Interagency Committee staffed an information booth at the 1993 International Oil Spill Conference and Exposition March 29-31, 1993, in Tampa, FL. More than 1,500 copies of the 5 Committee publications were distributed. These were: Research and Technology Plan; R&D Database; R&D Database User Guide; R&D Forum Proceedings; and Introducing... Interagency Committee.

There were over 1,850 conference attendees. A special evening session on Interagency Committee activities was held March 30, 1993. A booklet summarizing the activities and future plans of the Interagency Committee was distributed at the special session.

To promote cooperative R&D efforts, the Committee also made information available at the 1994 Arctic and Marine Oil Spill Program Technical Seminar and the 1994 Eleventh Technical Seminar on Chemical Spills.

3.6 Coordination With States and Industry.

The Committee has invited and will continue to invite state R&D program managers to make presentations to the Interagency Committee at specially designated quarterly meetings. The first such meeting was held April 19, 1994 in Herndon, Virginia. Several states have active oil pollution R&D programs. These include Alaska, California, Louisiana, and Texas. The Committee contacted representatives of every coastal state about the possibility of Federal-state coordination in oil pollution R&D. In addition, the Chairman of the Interagency Committee is a member of the R&D Advisory Committee (RDAC) for the oil industry-funded Marine Spill Response Corporation (MSRC). In that role, he helps to coordinate the R&D programs of the Federal agencies and the MSRC.

The Executive Director attended the quarterly meeting of the Hazardous Substance Spill Technology Review Council (HSSTRC) in Anchorage, AK, at the Alaska Department of Environmental Conservation (ADEC). The HSSTRC approves all R&D funded by the ADEC.

3.8 OHMSETT - The National Oil Spill Response Test Facility

OHMSETT - The National Oil Spill Response Test Facility - is the only facility where full-scale oil spill response equipment tests can be conducted using oil under controlled conditions including varying wave conditions. Located in Leonardo, NJ, one hour south of New York City, OHMSETT is available on a reimbursable basis to both private and public sectors as a research center to test oil spill containment/ cleanup equipment or techniques, remote sensing devices, sorbents, or to conduct training in oil spill response.

OHMSETT's main feature is an above ground concrete tank measuring 203 meters long, by 20 meters wide, by 3.4 meters deep. The tank is filled with 9.84 million liters of brackish water. OHMSETT was refurbished in 1991-92 at a cost of \$1.5 million, with funding provided by MMS, USCG, and Environment Canada. This interagency effort corrected historical leakage problems and extended the life of the facility by an estimated 15-20 years. All major technical systems were upgraded and state-of-the-art automated data collection and video systems were installed. The Oil Distribution and Recovery System can now accommodate the viscous oils (up to 70,000 centistokes) which are required for testing.

MMS budgets \$1.2 million annually to operate and maintain OHMSETT with contract costs of about \$1 million. Additional costs associated with specific tests are assessed to the sponsor. Twelve tests were completed since OHMSETT was reactivated in 1992. The U.S. Coast Guard has been the primary user with MMS, Canadian Coast Guard, Environment Canada and the Marine Spill Response Corporation providing additional support. An active test schedule is planned for FY 95 and FY 96.

The OHMSETT International Testing Committee (OITC), currently chaired by MMS, oversees testing activities and coordinates and prioritizes research activities at the facility. Representatives from MMS, the U.S. and Canadian Coast Guards, EPA, NIST, Navy, the USACE, and Environment Canada are active OITC participants.

Operation of OHMSETT is authorized by OPA 90. Title VII stipulates that "agencies represented on the Interagency Committee shall ensure long term use and operation of the Oil and Hazardous Materials Simulated Environmental Test Tank (OHMSETT) Research Center in New Jersey for oil pollution technology testing and evaluations." The Committee has assigned OHMSETT management responsibilities to the MMS based on its past success in reopening and managing the facility.

3.9 Port Demonstration Projects

Extensive planning for the first of four port demonstrations was performed by the Coast Guard during this period. The demonstration was held at the University of New Orleans during December 8-9, 1994. An exhibit hall showcasing approximately 30 projects was open to the public, free of charge, on both days. An outdoor static equipment display of recently procured prepositioned response equipment was setup in an adjacent parking lot. MMS, NOAA, Maritime Administration, and Louisiana Universities also plan to have demonstration projects.

To avoid having the New York demonstration follow closely on the heels of New Orleans demonstration, and to work around three major related conferences in 1995, the Committee decided to reschedule the New York demonstration to the fall of 1995.

4. Interagency Committee Activities For 1995-1996.

4.1 Overview.

OPA 90 Title VII requires a report on Committee activities proposed to be carried out over the current two fiscal year period. These are shown in the following list and will be discussed in further detail in the next biennial report.

4.1 Activity/Status for next Biennial Report.

Activity Status

Second International Oil Spill R&D Forum	Complete
Revise Oil Pollution Research and Technology Plan	Ongoing
Regional Research Program	Ongoing
New York Port Oil Pollution Minimization Project	Complete
Oil Spill Model/Analysis of R&D Needs and Priorities	Ongoing
Coordination Meetings with States and Industry	Ongoing